



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
087857,585	05/16/97	ABE F	WATK:040E

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IM61/0222

EXAMINER	
PREISCH, N	
ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 02/22/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/857,585

Applicant(s)
Abe et al.

Examiner
Nadine Preisch

Group Art Unit
1764



☒ Responsive to communication(s) filed on Feb 12, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 3, 5, 6, 12, and 14 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 3, 5, 6, 12, and 14 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Continued Prosecution Application

The request filed on January 12, 1999 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/857,585 is acceptable and a CPA has been established. An action on the CPA follows.

The amendment filed January 12, 1999 requesting that the specification be amended to refer to the present Continued Prosecution Application (CPA) as a continuation application of Application No. 08/857,585 has not been entered. As set forth in 37 CFR 1.53(d)(7), a request for a CPA is the specific reference required by 35 U.S.C. 120 to every application assigned the application number identified in such request. Thus, there is no need to amend the first sentence of the specification to refer back to the prior application and any such amendment shall be denied entry.

Claim Rejections - 35 U.S.C. § 112

Applicants' amendments in paper no.41, filed 2-12-99 are sufficient to overcome the 112 rejection in the previous office action.

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Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 5, 6, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the translation of Hei 2-56247 in view of Eberly, Jr. et al.(3,591,488).

In the pending application, applicants claim a composition comprising a high silica zeolite having a Si/Al ratio of not less than 40, and a heat resistant oxide, wherein the said heat resistant oxide is loaded with a noble metal. Applicants further claim an adsorbent comprising a honeycomb structure coated with a heat resistant oxide loaded with a noble metal.

The translation of Hei 2-56247 teaches a composition for automobile exhaust gas treatment comprising a zeolite and a heat resistant oxide in the form of alumina. The Hei 2-56247 translation also discloses that a noble metal in the form of Pt is loaded on alumina. For example, see page 3, lines 7-13. The translation of Hei 2-56247 also discloses that the support is

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honeycomb shaped. In addition, the support is coated with a heat resistant oxide in the form of alumina. For example, see page 3, lines 6-7.

The translation succeeds in teaching applicants' claimed zeolite component and heat resistant oxide component, other than zeolite, loaded with a noble metal in the form of alumina loaded with Pt. Furthermore, Hei 2-56247 also succeeds in teaching applicants' honeycomb shaped support.

Several differences are noted between the applied art of translation of the Hei 2-56247 and applicants' claimed invention. The translation of Hei 2-56247 is silent about the Si/Al ratio in the zeolite. Furthermore, translation of Hei 2-56247 is silent about the specific structure of the honeycomb.

The reference of Eberly, Jr. et al.(3,591,488) is cited for the general teaching that it is known in the art that zeolites with that high silica/alumina ratios, such as 50, are desirable for high temperature conversions because they display increased thermal stability. For example, see column 2, lines 41-45 and column 5, lines 2-5.

Since it is desirable for compositions to be thermally stable for exhaust gas treatment process due to the high temperatures involved, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select a zeolite with a high silica/alumina ratio in the exhaust gas composition disclosed by the translation of Hei 2-56247 because it is known in the art that zeolites with a high silica/alumina ratio display increased thermal stability.

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Furthermore, applicants' limitations directed at the specific shape of the honeycomb composition are not considered to be patentable distinctions because such shapes are conventional in the art.

Therefore, applicants' claimed compositions fail to patentably distinguish over the applied prior art.

Claim Rejections - 35 U.S.C. § 103

Claims 3, 5, 6, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the translation of Hei 2-56247 in view of Inoue et al.(5,223,236).

In the pending application, applicants claim a composition comprising a high silica zeolite having a Si/Al ratio of not less than 40, and a heat resistant oxide, wherein the said heat resistant oxide is loaded with a noble metal. Applicants further claim an adsorbent comprising a honeycomb structure coated with a heat resistant oxide loaded with a noble metal.

The translation of Hei 2-56247 teaches a composition for automobile exhaust gas treatment comprising a zeolite and a heat resistant oxide in the form of alumina. The abstract also discloses that a noble metal in the form of Pt is loaded on alumina. For example, see page 3, lines 7-13. The translation of Hei 2-56247 also discloses that the support is honeycomb shaped. In addition, the support is coated with a heat resistant oxide in the form of alumina. For example, see page 3, lines 6-7.

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The translation of Hei 2-56247 succeeds in teaching applicants' claimed zeolite component and heat resistant oxide component, other than zeolite, loaded with a noble metal in the form of alumina loaded with Pt. Furthermore, translation of Hei 2-56247 also succeeds in teaching applicants' honeycomb shaped support.

Several differences are noted between the applied art of the translation of Hei 2-56247 and applicants' claimed invention. The translation of Hei 2-56247 is silent about the Si/Al ratio in the zeolite. Furthermore, the translation of Hei 2-56247 is silent about the specific structure of the honeycomb.

The reference of Inoue et al.(5,223,236) teaches the use of high silica zeolite with a silica/alumina ratio of greater than 20 for exhaust gas conversion. See column 1, lines 53-56 and column 2, lines 7-10.

Since the translation of Hei 2-56247 does not limit the silica/alumina ratio of the zeolite, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select any silica/alumina ratio greater than 20 (e.g. a ratio of 40) because the reference of Inoue et al.(5,223,236) teaches that any silica ratio greater than 20 is desirable for exhaust gas treatment. Applicants have not shown anything unexpected with respect to the claimed silica/alumina ratio.

Furthermore, applicants' limitations directed at the specific shape of the honeycomb composition are not considered to be patentable distinctions because such shapes are conventional in the art.

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Response to Arguments

Applicants' arguments filed 2-12-99 have been fully considered but they are not persuasive.

Applicants argue 1) the combined references do not suggest the advantages of applicants' claimed invention and 2) one of ordinary skill in the art would not have been motivated to combine the teachings of Eberly et al. with the reference of Toyota (Hei 2-56247).

Applicants' argument 1) is not persuasive in overcoming the previous rejection because applicants' advantages do not rebut the examiner's motivation for combining references. For instance, the advantages do not serve to negate the teaching that increased thermal stability is achieved with a high silica/alumina ratio.

The examiner disagrees with applicants' argument 2) wherein one of ordinary skill in the art would not have been motivated to modify the reference of Toyota with that of Eberly. Motivation for combining references results from the fact that the reference of Eberly, Jr. et al. (3,591,488) specifically discloses that "It has been found that for general catalytic or absorptive uses, the aluminosilicates having higher silica to alumina ratios will be preferred due to their higher stability....". For example, see column 2, lined 39-44. Since the composition of Toyota is used for the catalytic purpose of treating exhaust gas, one would have been motivated to select a high silica zeolite such as that claimed by applicants. In addition, the reference of Eberly, Jr. et al. does not limit the processes the high silica zeolite is used in. Since the reference broadly discloses that the high silica zeolite is useful in various hydrocarbon conversion processes without limiting

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its function, it is also considered to be useful in exhaust gas conversion, which is considered to be a type of hydrocarbon conversion. Applicants have not pointed to any teaching in the reference of Eberly, Jr. et al., that indicates that the high silica zeolite "can not" be used in an exhaust gas conversion.

Prior Art of Record

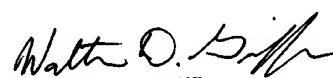
A copy and translation of Hei 2-56247, the entire reference for (113:102645 CA), is cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadine Preisch whose telephone number is (703) 305-2667. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

February 11, 1999
N.P.

NP


Walter D. Griffin
Primary Examiner